

ABSTRACT OF THE INVENTION

The present invention is directed to a method and system for capturing an information signal from within a noisy background utilizing a non-Gaussian model for the *a priori* statistics of the information signal conditioned on other *a priori* quantities. A specific implementation utilizing a Gaussian Mixture Model (GMM) is described. The GMM implementation includes Wiener filtering as a special case, and includes methods for adaptively tracking multiple properties of the input noise and the information signal, including noise PSD, information signal PSD, information signal spectral amplitude, and probability of information signal presence versus time and frequency.

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